

[54] **INFRARED LIGHT BEAM X-Y POSITION  
ENCODER FOR DISPLAY DEVICES**[75] Inventors: **Frederick A. Ebeling**, Dearborn,  
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Urbana, Ill.[22] Filed: **Feb. 28, 1972**[21] Appl. No.: **229,870**[52] U.S. Cl. .... **178/18, 250/83.3 HP, 178/6.8**[51] Int. Cl. .... **G08c 21/00**[58] Field of Search ..... **178/6.8, 17, 18,**  
**178/19, 20; 340/173 LT, 173 PL, 173 CR;**  
**250/83.3 HP, 83 UV; 35/9 R**[56] **References Cited****UNITED STATES PATENTS**

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Betts.*Primary Examiner*—Kathleen H. Claffy*Assistant Examiner*—Kenneth Richardson*Attorney*—Charles J. Merriam et al.[57] **ABSTRACT**

A crossed light beam position encoder including x and y coordinate arrays of paired infrared light sources and detectors for covering a display device surface with x and y crossed light beams, scanning means coupled to the sources and detectors for electronically sequentially scanning the x and y arrays so that only one source is emitting light and its associated detector is detecting light at any particular time. Means are included for noting the digital address of the beams during sequential scanning and for stopping the scan when the beams are interrupted, the digital address and therefor the position of the broken beams are transferred back to a computer.

**13 Claims, 3 Drawing Figures**